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FEB 19 2005

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Ref: 09/930,933

14 Pages plus cover letter

Examiner Bilgrami

Attached is a discussion of the present invention and the prior art analysis provide by you. The entire set of original claims is attached where claims 3 and 4 are canceled and new claim 21 is added.

The inventor appreciates your assistance and the clarification of the date of the prior art.

If you have any questions or would like clarification/discussion, my phone number is 408-757-5862.

Thank you for your assistance.



N. K. Ouchi,
Inventor

FEB 19 2005

Response to USPTO Office Action

Confirmation Number: 2272

Examiner: Asghar Bilgrami

Art Unit: 2143

Title: Information Transfer Protocol System and Private Exchange

Application Number: 09/930,933

Inventor: Norman Ken Ouchi

Date: February 19, 2005

Claims 1-20 are rejected under 35 USC 102(e) as being anticipated by Breen et al (US Pub No 2004/0002913 A1)

FIELD OF THE INVENTION

This invention is related to electronic information transfer between trading partners and more particularly to the information transfer protocols and processing, the topology of information exchange, and the delivery of the information transfer service.

BRIEF SUMMARY OF THE INVENTION

In the present invention, a closed loop business process between trading partners is supported using finite state machine models that define the behavior of each trading partner, state dependent messages that are exchanged, state storage for each instance of a business transaction, and information for the process including means to generate user screens to display process information and request user input. Multiple business processes may be supported since a closed loop process depends on the trading relationship. Each distinct business process is supported by a finite state machine and information to generate user screens. The present invention discloses an evolutionary method to integrate the business process transactions to the enterprise systems. The present invention further discloses a web service supporting one or more information protocol systems to minimize the entry cost.

Claim 1 without any changes reproduced for the discussion.

1. An information transfer protocol system connected to a network, a computer with a display for a user connected to the network, and an information transfer protocol using the network and supporting a process

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describable as a finite state machine and a state dependent information transfer message
where the information transfer protocol system comprising
 the finite state machine describing the process,
 an information storage,
 a process state storage;
receives a first state dependent information transfer message from the network;
determines from the process state storage, the first state dependent information transfer message, and the finite state machine describing the process, the next state of the process;
determines from the next state of the process, the first state dependent information transfer message, and the information storage, the information needed to be entered by the user;
generates a screen displaying information from the first state dependent information transfer message and the information storage and requesting the information needed to be entered by the user;
sends the screen to the computer with the display for the user to enter the requested information;
receives the requested information entered by the user;
updates the information storage;
updates the process state;
creates using the information entered by the user and information from the information storage, a second state dependent information transfer message;
sends the second state dependent information transfer message to the network;
and, completes the operation on the first state dependent information transfer message.

Discussion:

The present invention discloses a finite state machine to describe the process, a process state storage, and an information storage including the information and screens for user input. It is a more generalized invention than Breen et al. Breen et al implies a specific process and screens for the aggregation of stock transactions. The stock aggregation process may have states and screens but are "hard wired" into the invention. Breen does not teach the use of a finite state machine as a means to describe the process or a process state storage or information storage such that other processes can be implemented. Breen can only process aggregated stock transactions. The present invention provides for the description of a process as a state machine with process state storage and information storage including user screens. The present invention can implement two or more processes and not limited to a specific "hard wired" process as disclosed by Breen. As such, the present invention with appropriate finite state machine definition and information including user screens may be applied to the process as described by Breen. That is, the present invention can implement the process disclosed by Breen but Breen cannot implement the present invention.

Geller discloses downloading a website function to the local PC to off load transactions on an e-commerce server. Geller does not disclose a finite state machine to describe the downloaded functions. Geller provides a "hard wired" implementation. That is, the present invention can implement the process disclosed by Geller but Geller cannot implement the present invention.

Breck, et al discloses a system and method for resolving transaction disputes using a secondary transaction number. Breck does not disclose a finite state machine to describe resolving the transaction disputes. Breck provides a "hard wired" implementation. That is, the present invention can implement the process disclosed by Breck but Breck cannot implement the present invention.

The present invention is to support closed loop, state dependent business processes between trading partners. The business processes are defined between trading partners and are different for each trading agreement. Multiple different processes must be implemented. Business processes must be added, deleted, and changed depending on the trading partner agreements. Hence, the business processes are not "hard wired" and a system to support the processes must have a means to define the processes and implement the processes.

The vision for e-commerce between trading partners is to integrate the business process transactions with their business systems. Much of the transactions between trading partners have depended on mail, e-mail, FAX, and phones. There is limited electronic integration between trading partners. Electronic integration has been hampered by the difficulty of determining the actual manual business process. The "good" process is easy to define and implement. The

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error detection and correction is hard to define. The manual process includes people who have experience and have the ability to handle errors.

Closed loop, finite state machine business process definitions have been defined for application to system integration and implemented in XML, EDI, or other machine readable technologies. The business information is encoded in compact electronic messages. The transaction messages and finite state machines are not meant for people to use. Integration to the business systems requires complete and accurate knowledge of the actual business processes. Except for simple cases, few enterprises have successfully integrated electronic transactions to their business systems.

The present invention provides a means for evolutionary integration of business systems with business partners. The first step is the implementation of the closed loop, state dependent process with a manual interface so that the experienced people can deal with the state dependent transactions. Claim 1 describes an information transfer protocol system that provides a finite state machine defining a business process with a trading partner, a state storage to keep the state of a transaction, and an information storage including the information required for the state dependent transaction so that a user screen can be generated and displayed. Claim 1 provides a manual interface for users to replace the mail, e-mail, etc. Claim 1 is distinguished over the prior art by the definition of the process as a state machine, state storage, and information including means to generate user screens. Claim 1 permits a trading partner to implement a state dependent business process appropriate for the other trading partner and state dependent transaction using manual input. Claims 3 and 4 are cancelled and replaced by Claim 21 (new) that describes the user of a second state machine to process a second state dependent transaction to support a second business process. The system must support multiple closed loop processes so multiple state machines, message formats, types of information, and means to generate user screens are provided.

The next set of steps begin automation of the business processes; claim 5 discloses limits on field values such that if met, a state dependent response is sent without manual intervention. Claim 6 discloses further automation where a transaction is sent to the enterprise business system. Claim 15 discloses further automation where a transaction is received from the enterprise system. Thus, integration with the business systems is done in an evolutionary process where exception processing is performed manually. Since a significant percentage of the transactions are "good", rules can be defined and automation can take a significant portion of the workload from the manual process. The exceptions are still processed manually. As the exceptions are better understood, rules can be formulated and the process for an exception can be automated.

To lower the entry cost, the information transfer protocol system is implemented as a web service where costs may be shared with other companies. A large

company may use the shared web service to start the process and may decide to implement a web service dedicated to the company. Claim 7 describes the aggregation of two information transfer protocol systems in a server such that two independent information transfer protocol systems can co-reside in the same web server. Claim 9 describes a fourth information transfer protocol system external to the web server and both connected by a network such that the user at the web server can execute transactions with the fourth information transfer protocol system.

The business processes are closed loop requiring two state machines that change states based on the state dependent protocol messages. Claim 17 discloses supporting a closed loop process between two information protocol systems each with state machines, state storage, and information storage including means to generate user screens. Claims 18, 19, and 20 disclose means for evolutionary integration to the enterprise systems.

Breen, Geller, and Breck are "hard wired" implementations of business processes. None disclose a state machine, state storage, and information storage with means to generate user screens to implement closed loop business processes, means to support multiple closed loop business processes where the process is dependent on the trading relationship. None disclose an evolutionary means starting with a manual process and step-by-step integration with business systems.

The present invention with proper definition of state machine, state storage, and information storage and user screens, can implement the function disclosed by Breen or Geller or Breck. Neither Breen or Geller or Breck can implement the present invention.

Respectfully Submitted

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